

CLAIMS

1. A hydroelectric generator for use with moving water, comprising:
 - a support configured to secure the hydroelectric generator with respect to the moving water;
 - a fixed axle coupled to the support;
 - a transmission axle coupled to the support via a coupling device and in parallel to the fixed axle;
 - a first mechanical transmission system configured to orbit the transmission axle about the fixed axle;
 - a second mechanical transmission system configured to spin the transmission axle; and
 - a third mechanical transmission system configured to drive a first driven member of a device for generating electricity.
2. The hydroelectric generator of claim 1 wherein the first mechanical transmission system comprises:
 - a drum rotatably coupled to the fixed axle, wherein the transmission axle is rotatably mounted within the drum; and
 - a plurality of paddles depending from the drum and configured to receive a force applied by the moving water to cause the drum and the transmission axle to orbit about the fixed axle.
3. The hydroelectric generator of claim 2, wherein the drum contains a water-tight compartment.
4. The hydroelectric generator of claim 1 wherein the second mechanical transmission system comprises a sun gear coupled to the fixed axle for engaging a pinion gear coupled to the transmission axle.

5. The hydroelectric generator of claim 4, wherein the gearing ratio between the sun gear and the pinion gear is at least an 8 to 1 ratio.

6. The hydroelectric generator of claim 1, wherein the third mechanical transmission system comprises a gear coupled to the transmission axle that engages a gear configured to drive the first driven member of the device for generating electricity.

7. The hydroelectric generator of claim 1, wherein the third mechanical transmission system comprises a drive member coupled to the transmission axle and configured to drive the first driven member of the device for generating electricity.

8. The hydroelectric generator of claim 1, wherein the third mechanical transmission system is configured to drive a first driven member of a direct current electrical generator.

9. The hydroelectric generator of claim 1, wherein the third mechanical transmission system is configured to drive a first driven member of an alternator.

10. The hydroelectric generator of claim 1, wherein the third mechanical transmission system is configured to drive a plurality of driven members of a device for generating electricity.

11. The hydroelectric generator of claim 10, wherein the third mechanical transmission system is configured to drive a first driven member of a device for generating electricity in a first direction and a second driven member of a device for generating electricity in a second direction.

12. The hydroelectric generator of claim 11, further comprising a device for generating electricity, wherein a first driven member of the device for generating electricity is coupled to a coil of wire and a second driven member of the device for generating electricity is coupled to a magnet.

13. A hydroelectric generator for use with moving water, comprising:
a support configured to secure the hydroelectric generator with respect to the water;

a fixed axle coupled to the support;

a first transmission axle coupled to the support via a coupling device and in parallel to the fixed axle;

a second transmission axle couple to the support via a coupling device and in parallel to the fixed axle;

a first mechanical transmission system configured to orbit the transmission axles about the fixed axle;

a second mechanical transmission system configured to spin the transmission axles;

a first device for generating electricity;

a third mechanical transmission system configured to drive a first driven member of the first device for generating electricity;

a fourth mechanical transmission system configured to drive a second driven member of the first device for generating electricity;

a second device for generating electricity;

a fifth mechanical transmission system configured to drive a first driven member of the second device for generating electricity; and

a sixth mechanical transmission system configured to drive a second driven member of the second device for generating electricity.

14. A method of generating electrical power from a source of moving water comprising:

orbiting an axle about a central axis;
rotating the axle;
coupling the axle to a drive of a device for generating electricity; and
rotating the drive of the device for generating electricity.

15. The method of claim 14, wherein the step of orbiting an axle about a central axis comprises orbiting a drum about the central axis.

16. The method of claim 14, wherein the device for generating electrical energy is a direct current generator.

17. The method of claim 14, wherein the device for generating electrical energy is an alternator.

18. The method of claim 14, further comprising:
coupling the axle to a second drive of the device for generating electricity; and
rotating the second drive of the device for generating electricity in a different direction than the first drive of the device for generating electricity.

19. The method of claim 14, wherein the drive of the device for generating electricity is coupled to a coil of wire.

20. The method of claim 14, wherein the drive of the device for generating electricity is coupled to a magnet.

21. A hydroelectric generator for use with moving water comprising:
means for supporting the hydroelectric generator with respect to the water;

means for applying a force generated by the moving water to cause a transmission axle to orbit about a fixed axle;

means for applying a force to the transmission axle to cause the transmission axle to rotate; and

means for applying a force to a driven member of a means for generating electricity to cause the driven member to rotate with respect to the support means.

22. The hydroelectric generator of claim 21 further comprising means for applying a force to a second driven member of the means for generating electricity to cause the second driven member to counter-rotate with respect to the first driven member and to rotate with respect to the support means.